

REMARKS

Claims 1-32 are presently pending in the captioned application with no claim amendments being made.

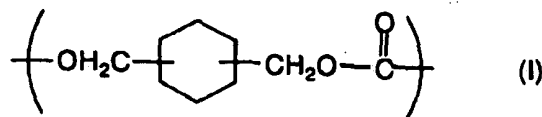
Applicants note that the cited reference fails to teach the presently claimed aliphatic compounds. Since each and every claimed limitation is not taught, Applicants respectfully traverse the rejection.

Accordingly, Applicants respectfully request the Examiner to reconsider the rejections in view of the argumentation and allow all claims pending in this application.

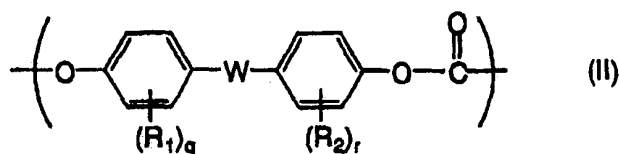
1. Rejection of Claims 1-32
under 35 U.S.C. § 102(a), (b) or (e)

The Office Action rejects claims 1-32 under 35 U.S.C. § 102 (a), (b) or (e) as being anticipated by U.S. Patent 5,432,250 ("Yamato et al."). The Office Action states:

Applicants' claim 1 discloses a plastic lens formed of a copolycarbonate resin comprising a structural unit (I) of the following general formula (I), . . .



and a structural unit II of the following formula



The reference USP 5,432,250 discloses to a process for producing a polycarbonate. More particularly, the present invention is concerned with a process for producing a polycarbonate by subjecting a dihydroxy compound and a bisaryl carbonate to melt polycondensation through transesterification.

Examples of the cycloalkyl group include cyclopropyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl groups. Examples of the aralkyl group include benzyl, phenethyl and benzhydryl groups. Examples of the aryl group include phenyl, naphthyl, and anthryl. The aryl group is preferably a phenyl group. The above-described alkyl, cycloalkyl, aryl and aralkyl groups may have at least one substituent which is inert under reaction conditions. Examples of such a substituent include a halogen atom, an alkoxy group, an aryloxy group, an aralkyloxy group, an alkylthio group, a cyano group and a nitro group.

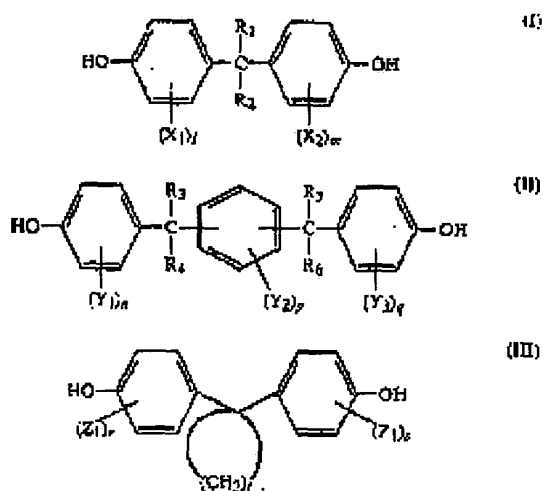
Polycarbonates are a general-purpose engineering thermoplastic and have found a wide range of applications, particularly in injection molding or a glass sheet as an alternative to a windowpane.

The term "paddle" used herein is intended to mean a discontinuous blade (that is, a blade whose bottom is not continuous with the

bottom of an adjacent blade) as opposed to a screw. Although examples of the form include a convex lens and a pseudo-triangle, the form of the paddle is not limited to those only.

The reference USP 5,432,250 discloses in col. 3 lines 1-30 and col. 4 lines 1-36

Among them, preferred dihydroxy compounds are compounds represented by the following general formulae (I), (II) and (III):



(wherein R_1 , R_2 , R_3 , R_4 , R_5 and R_6 , which may be the same or different, each stand for a hydrogen atom, an alkyl group, a cycloalkyl group, an aralkyl group or an aryl group, X_1 , X_2 , Y_1 , Y_2 , Y_3 , Z_1 and Z_2 , which may be the same or different, each stand for a halogen atom, an alkoxy group, an alkyl group, a cycloalkyl group, an aralkyl group or an aryl group, l , m , n , p , q , r and s are each an integer of 0 to 4 and t is an integer of 2 to 10).

Examples of the alkyl group include straight-chain or branched alkyl groups such as methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, tert-butyl, n-pentyl, isopentyl, neopentyl, hexyl, heptyl, octyl, 2-ethylhexyl, decyl, undecyl and dodecyl groups. The alkyl group is preferably a straight-chain or branched alkyl group having about 1 to 8 carbon atoms.

Examples of the cycloalkyl group include cyclopropyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl groups.

Examples of the aralkyl group include benzyl, phenethyl and benzhydryl groups. Examples of the aryl group include phenyl, naphthyl and anthryl groups. The aryl group is preferably a phenyl group.

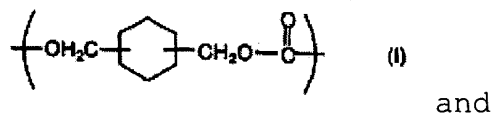
In view of the above, there appears to be no significant difference between the reference(s) and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Applicants respectfully traverse the rejection because each and every claimed limitation is not taught. In particular, Yamato et al. does not teach the presently claimed **aliphatic** dihydroxy compounds. Instead, the compounds of Yamato et al. are strictly limited to **aromatic** polycarbonates. As the Examiner will recall, an aliphatic compound is by definition the opposite of an aromatic compound; i.e. aliphatic compounds lack a stable arrangement of atoms in its molecular structure.

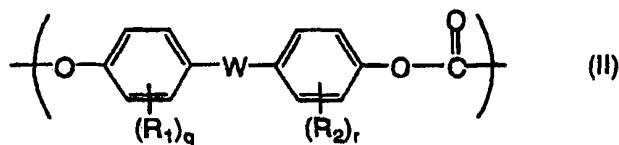
Turning to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

The prior art reference must also be enabling, thereby placing the allegedly disclosed matter in the possession of the public. In re Brown, 329 F.2d 1006, 1011, 241 USPQ 245, 249 (C.C.P.A. 1964). In order to accomplish this, the reference must be so particular and definite that from it alone, without experiment or the exertion of his own inventive skill, any person versed in the art to which it pertains could construct and use it. Id. at 250.

In the present application, the independent claims contain a copolycarbonate resin having a structural unit (I) of the general formula (I),



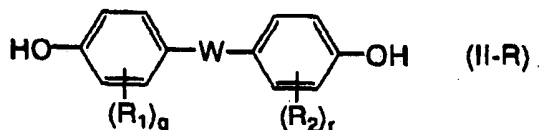
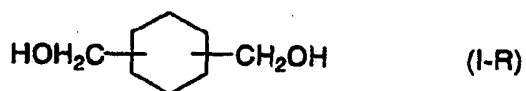
a structural unit (II) of the formula (II)



wherein the structural unit (I) has a molar amount percentage of 15 to 85% on the basis of the total amount of the structural units (I) and (II). Notably, the recurring structural unit (I) of the copolycarbonate resin as shown supra

contains an aliphatic group derived from a starting aliphatic dihydroxy compound (I-R).

The starting aliphatic dihydroxy compound (I-R) is polymerized with an aromatic bisphenol represented by the formula (II-R) and a carbonate ester by an ester-exchange method to produce the presently claimed copolycarbonate resin. In particular, the starting aliphatic dihydroxy compound (I-R) of the present invention is produced from cyclohexanedimethanol ("CHDM") represented by the formula (I-R).



Notably, the starting dihydroxy compound (I-R) is also an **aliphatic** dihydroxy compound in which two methoxy groups are bonded to a cyclohexane ring.

In contrast, Yamato et al. does not teach an **aliphatic** dihydroxy compound. Instead, Yamato et al. is strictly limited to **aromatic** polycarbonates comprising bisphenol A. The following aromatic dihydroxy compounds are given in Yamato et

al. as typical examples: bis(hydroxy**aryl**)alkanes, bis(hydroxy**aryl**)arenes, bis(hydroxy**aryl**)cycloalkanes, dihydroxydi**aryl** ethers, dihydroxydi**aryl** sulfides, dihydroxydi**aryl** sulfoxides and dihydroxydi**aryl** sulfones. See Yamato et al. at col. 2, line 65 to col. 3, line 2. As can clearly be seen by the aryl groups, all the structures of Yamato et al. are aromatic dihydroxy compounds. None are aliphatic or alicyclic.

Although Yamato et al. does teach cycloalkyl groups at col. 3, lines 42-44, the taught cycloalkyls are merely examples of substituents for the general compounds. For example, Yamato et al. teaches that the substituents for the compounds of the general formulas (I) to (III) denoted as R_1 to R_6 , X_1 to X_2 , Y_1 to Y_3 and Z_1 to Z_2 can include cyclopropyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl groups. See id. at col. 3, line 27-30.

However, the cycloalkyl groups of Yamato et al. are strictly limited to the substituents R_1 to R_6 , X_1 to X_2 , Y_1 to Y_3 and Z_1 to Z_2 and not the general formulas of Yamato et al. Clearly, alicyclic dihydroxy compounds are not taught by Yamato et al. for the formulas (I) to (III). Therefore, each and every claimed limitation is not taught.

Regarding the Office Action's comments for a "paddle" on page 3, paragraph 4 of the outstanding rejection, Applicants note that the comments appear to be unrelated to the outstanding rejection and further appear to be a direct quote of col. 14, lines 9-14 of Yamato et al. In particular, the quote relates solely to a type of a twin-screw extruder wherein the shape of a paddle is similar to a convex lens or a pseudo-triangle. Clearly, the comments regarding a "paddle" are unrelated to the outstanding anticipation rejection for aliphatic dihydroxy compound polymerized with aromatic bisphenol.

For all these reasons, Applicants respectfully submit that the presently claimed invention is unanticipated by the cited reference and respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §§ 102 (a), (b) or (e).

CONCLUSION

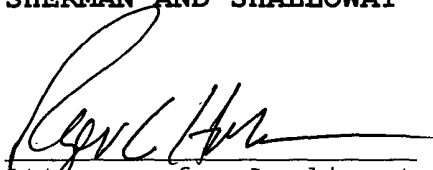
In light of the foregoing, Applicants submit that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the

rejection of the pending claims and allow the pending claims.
Favorable action with an early allowance of the claims pending
is earnestly solicited.

Respectfully submitted,

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